

Claims

1. An *in vitro* method for developing dendritic Langerhans type cells, said method comprising the steps of:
 - a. culturing cells selected from peripheral blood monocytes and bone marrow cells in a medium containing platelets obtained from the same species or phylogenetically close species; and
 - b. incubating the culture at about 30 to about 40°C for a period sufficient to enable formation of mature dendritic Langerhans type cells.
2. A method as claimed in claim 1 wherein the medium comprises RPMI-1640.
3. A method as claimed in claim 1 wherein the cells are cultured for a period of about 2 to about 8 days.
4. A method as claimed in claim 1 wherein the medium further comprises fetal calf serum.
5. A method as claimed in claim 1 wherein human platelets are added to the medium to develop dendritic Langerhans type cells.
6. A method as claimed in claim 1 wherein rat platelets are added to the medium containing mice blood cells to develop dendritic Langerhans type cells.
7. A method to generate human dendritic Langerhans type cells *in vitro* from human peripheral blood monocytes using human platelets, wherein the said method comprises the following steps:
 - a. preparing human peripheral blood monocytes;
 - b. preparing human platelets;
 - c. culturing human peripheral blood monocytes with human platelets for *in vitro* generation of human dendritic Langerhans type cells;
 - d. morphological analysis of *in vitro* generated human dendritic Langerhans type cells; and
 - e. flow cytometric analysis of *in vitro* generated human dendritic Langerhans type cells.
8. A method as claimed in claim 8 wherein the method for generation of mouse dendritic Langerhans type cells, comprises the following steps:

- a. preparing mouse bone marrow cells;
- b. culturing of rat platelets;
- c. *in vitro* generation of mouse dendritic Langerhans type cells by culturing mouse bone marrow cells with rat platelets; and
- d. morphological analysis of *in vitro* generated mouse dendritic Langerhans type cells.

9. A method to generate dendritic Langerhans type cells from any mammalian species using platelets wherein the said method comprises the following steps:

- a. preparing peripheral blood monocytes and or bone marrow cells;
- b. culturing peripheral blood monocytes or bone marrow cells with platelets of the same species or phylogenetically close species for *in vitro* generation of dendritic Langerhans type cells;
- c. morphological analysis of the *in vitro* generated dendritic Langerhans type cells; and
- d. flow cytometric analysis of the *in vitro* generated dendritic Langerhans type cells.

10. A method as claimed in claim 4, wherein the medium contains at least about 2% fetal calf serum.

11. A method as claimed in claim 10, wherein the fetal calf serum is about 10%.

12. A method as claimed in claim 1, wherein the medium omits an exogenous cytokine.

13. A method as claimed in claim 12, wherein the exogenous cytokine is granulocyte macrophage colony stimulating factor or interleukin-4.